

Central Bank Independence

A Critical View

Ignacio Mas

Merely establishing an independent central bank may not bring about its professed benefits, especially in developing countries. Institutional arrangements should force discipline on fiscal policy directly rather than indirectly through monetary policy.



Summary findings

While the expansive literature on central bank independence contains some criticisms to the independent central bank quasi-paradigm, few critical analyses have been undertaken in the years between Friedman (1962) and Posen (1994). Mas extends Posen's analysis to developing countries, discussing more broadly and systematically the reasons why merely instituting an independent central bank may not bring about its professed benefits, especially in developing countries.

Mas argues that widely reported empirical tests that are purported to support the central bank independence proposition are plagued by potential problems of simultaneity, reverse causality, missing variables, and measurement errors. Yet one cannot make positive recommendations about institutional arrangements for central banks if causality relations are not well established, says Mas. Institutions are shaped by a country's record of — and preferences for — inflation and may have little influence on them.

Mas also argues that the purported benefits of an independent central bank may be eroded by conflicts between fiscal and monetary policy and by inherent problems of central bank institutional design (especially mechanisms for board appointments, public accountability, and budgetary control). If these institutional problems are not solved, problems of dynamic inconsistency traditionally associated with

monetary policy are not eliminated, but merely transformed.

Mas suggests that the benefits of central bank independence are less likely obtained in less developed countries with shallow financial markets. Accordingly, central bank independence should be granted at a later stage in a country's financial sector development. If a less developed country seeks to establish a low-inflation path, it should concentrate on instituting financial policy reforms (such as liberalization and privatization) that bolster opposition to inflation rather than easily reversible and practically meaningless changes in legal and institutional structures. This will better ensure the sustainability — and hence, the credibility — of the government's anti-inflation stance.

Fiscal policy is often at the root of macroeconomic disturbances in developing countries. Fiscal policy is more deserving of special protection from politics because of fiscal dominance over monetary policy and its greater vulnerability to private interests. Mas suggests that the solution might be to make fiscal policy less susceptible to political pressures by creating an independent fiscal board.

Tying the fiscal hands of government may seem a far-fetched idea. But would it not make more sense to force discipline on fiscal policy directly rather than indirectly through monetary policy?

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Central Bank Independence: A Critical View

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1. Introduction

Central bank independence is an old idea whose support waxes and wanes. Interest in the issue has recently revived strongly, especially after Rogoff's (1985) formal technical treatment of the inflation bias and excessive policy volatility that result if monetary authorities have a short time horizon (high discount rate) or are exposed to political influences. Many researchers have since extolled the virtues of an independent central bank (henceforth ICB) in a *crescendo* of papers, both theoretical and empirical.

In the words of Alesina and Summers (1993, p. 151), "[d]elegating monetary policy to an agent whose preferences are more inflation averse than are society's preferences serves as a commitment device that permits sustaining a lower rate of inflation than would otherwise be possible." According to this view, a central bank that is subordinated to the government cannot credibly commit to price stability as the public will be aware of the dynamic inconsistency of its announcements and actions. Furthermore, it is argued that an independent monetary policy can create incentives for, or might even force, greater fiscal discipline on the part of the government.¹

The institution of an ICB can be accompanied by the legal formalization of limits on the monetization of government expenditures and of a set of narrow central bank policy objectives (i.e., price stability) or monetary rules. While these

can help further establish commitment and credibility, they are collateral to the purely institutional issue of whether the central bank should report to the government -- i.e., to the issue of central bank independence in the narrow sense.

The view put forth in this paper is not so much that the advantages of an ICB have been over-stressed as much as that its drawbacks and implementation problems have been overlooked. At the same time, empirical tests which are purported to support the central bank independence proposition are plagued by potential problems of simultaneity, reverse causality, missing variables and measurement errors. Thus, the widely reported simple correlation results are consistent with many potential explanations that do not warrant the independence of the central bank as a policy prescription. This paper does not intend to make a broad case *against* central bank independence. Rather, it merely seeks to put commonly touted arguments and empirical results in perspective.

While the expansive literature on central bank independence does contain some criticisms to the ICB quasi-paradigm, few (if any) critical analyses have been undertaken between Friedman (1959, 1962) and Posen (1994). This paper extends Posen's analysis to developing countries and discusses more broadly and systematically the reasons why the mere institution of an ICB may not bring about its professed benefits.

Some believe that countries get the inflation rate they really *want*. Accordingly, Section 2 takes a political view and discusses how a country's inflation record and central bank institutional arrangement are both shaped in part

by political forces bearing on government. Others believe that governments get the inflation rate they *deserve*. Section 3, then, extends this logic by looking at central bank-government relations. It focuses in particular on: (i) the potential for conflict between monetary and fiscal policy, (ii) the scope for an ICB's exercise of a truly independent monetary policy, and (iii) how these factors shape their institutional relationship. Sections 2 and 3 both suggest a number of reasons why low inflation and central bank independence are likely to be correlated though not necessarily directly causally related to each other. This is more than of statistical interest: one cannot make positive recommendations about legal or institutional arrangements for the central bank if causality is not established. Section 4 summarizes the factors that might explain the observed statistical correlation between inflation and central bank independence, and reviews the statistical evidence. Section 5 discusses the institutional design problems of setting up an ICB, and in particular issues associated with accountability, governance and operation. Even if central bank independence is fitting on normative grounds, it might not be desirable if there aren't appropriate mechanisms to institutionalize it.

This paper supports Banaian, Laney and Willett's (1983) observation that the benefits of central bank independence are less likely to obtain in less developed countries (LDCs) with shallow financial markets. Perhaps this explains why researchers have been so sympathetic to central bank independence: empirical analyses have tended to focus on OECD countries, and theoretical discussions have implicitly assumed the presence of deep financial markets. But clearly the

desirability of granting central bank independence in LDCs should be examined by looking at their inherent characteristics rather than merely as an extension of what seems to work in successful OECD countries. This paper suggests that central bank independence should be granted at a later stage in a country's financial sector development. This is counter to the experience in Latin America and to some extent in Eastern Europe over the last five years where some central banks have been given wide autonomy from at a relatively early stage of their financial sector reforms (e.g., Colombia and Venezuela in 1992, and Mexico in April 1994).² Furthermore, if an LDC seeks to establish a low-inflation path it should concentrate on instituting financial policy reforms (e.g., liberalization and privatization) that bolster opposition to inflation rather than easily reversible and practically meaningless changes in legal and institutional structures. This will better ensure the sustainability –and hence, credibility– of the government's anti-inflation stance.

This paper looks at the desirability of instituting central bank independence on narrow macropolicy grounds, but there might be other relevant considerations. For instance, granting central bank independence at an early stage of implementation of sweeping financial reforms as in Colombia, Venezuela and Mexico may serve to secure credibility in the continuity and sustainability of the reforms – independently of whether it also yields superior monetary and fiscal policy outcomes.

Granting independence to the central bank essentially represents elevating

monetary policy to a more consecrated level, beyond the fray of politics. In LDCs, however, fiscal policy is more deserving of special protection from politics because of fiscal dominance over monetary policy and the greater vulnerability of fiscal policy to private interests. For the sake of argument, Section 6 puts forth a proposal for an independent fiscal board (IFB), analogous to the more widespread ICB proposal. The relative conceptual and practical difficulties in implementing an IFB paradoxically help explain why the concept of central bank independence has received such wide support.

2. The politics of inflation and central bank independence

Goodman (1991) and Posen (1994) argue that the staunchest political constituency for low inflation is constituted by (private) banks. Banks' balance sheet structure (maturity mismatching of assets and liabilities and non-marketable nature of assets) render them particularly vulnerable to inflation. Drawing their political power from the fact that they act as an outside source of information and advice about monetary conditions, banks are in a position to lobby for anti-inflationary policies -- including granting independence to the central bank. Thus, effective financial sector opposition to inflation (henceforth FOI) will induce both low inflation and central bank independence, without the latter two having a causal relationship.

Similarly, opposition to inflation can arise from ingrained historical or sociological circumstances, which tends to broaden the constituency opposing inflation beyond the financial system. For instance, Swinburne and Castello-

Branco (1991) and Cukierman (1992) argue that the West German authorities' political will to not interfere with monetary policy (as institutionalized in the Bundesbank's independence) and their strong preference for low inflation may both stem from the collective memory of Germany's aberrant inflation record in the inter-war period.

Posen's framework can be used to understand why FOI has been typically very weak in LDCs through the 1980s -- and consequently why they have tended to have higher inflation rates *and* a low degree of central bank independence. First, the small size of the financial system relative to GDP reduces banks' clout. There is a dynamic compounding effect as higher inflation in turn further erodes FOI because of disintermediation (smaller power base) and increasing currency substitution, widespread indexation to inflation and shortening of loan maturities (weaker intensity of interest in opposing inflation).

Second, central banks' extensive regulation of banking activities and interest rates in LDCs through the 1980s has tended to dilute FOI as banks concentrated their political capital on opposing (or altering) regulations and adopted a more confrontational stance with the central bank. Public ownership of banks has been another common intervention mechanism for LDC governments in the financial system, which further dampened FOI.

Central banks in LDCs are often forced to intervene directly in the credit allocation process even if they do not wish *a priori* to intervene in resource allocation. In LDCs the central bank often cannot effect monetary policy through

indirect instruments due to the absence of deep government debt markets and the scarcity of reliable information on monetary conditions. Instead, they must often resort to outright credit restrictions for monetary control purposes, sometimes at the bank-by-bank level. The direct nature of these instruments makes banks' lobbying efforts individualistic (securing a larger share of aggregate credit) rather than cooperative (ensuring a reasonable monetary policy). FOI vanishes in this environment as credit restraint by the central bank is desired by banks jointly but not individually.

Third, developmentalist LDC governments following the import substitution industrialization strategy prevalent through the 1980s were more attuned to the interests of workers, farmers and manufacturers. Goodman argues that these interests favor a less restrictive monetary policy, and counteract FOI. Moreover, Cukierman argues that governments' preferences for fast growth and low interest rates led the (dependent) LDC central banks to take on the role of development banks. This rendered central banks easily capturable by such interests.

These two latter factors are mutually reinforcing. In LDCs, private banks very often form part of financial groups or conglomerates which are dominated by the industrial enterprises to a larger degree than in Germany or Japan. In a highly regulated financial environment and in the absence of well-functioning securities markets, related banks tend to act merely as conduits for inter-enterprise transfers and to gain access to cheap resources (due to subsidized government credit, controlled interest rates or preferential allocation of foreign exchange). Banks do

not play the central coordinating, governance and credit allocation functions for the group that is typical of universal banking arrangements in developed countries. Because of their very limited role, banks become subservient to industrial interests within their group, which tends to mitigate the intensity of their FOI.

Furthermore, in some instances financial institutions may support rather than oppose higher inflation. The cleansing effects of inflation may be welcome by banks that are carrying large losses in their books. In the extreme, if the banking system is technically insolvent --which has happened at some point in virtually all Latin American countries in the 1980s--, banks become net debtors and may be positively exposed to inflation. Also, in LDCs with high inflation rates, banks neglect traditional lending in favor of exchange rate and real estate speculation. This business shift is particularly acute in LDCs where bankers are well connected with government officials and have access to privileged information on impending policy actions. Persistent high inflation erodes FOI as banks develop a *modus vivendi* suitable to the new environment.

Finally, LDCs typically have a highly centralized government decision-making structure and often have fractionalized political parties (or factionalized single ruling parties). Posen argues that under these circumstances, FOI --or any other form of outside special interests-- is less likely to have a lasting impact. Political fragmentation and frequent government turnover reduces banks' incentives to "invest" in FOI. Goodman, on the other hand, argues that the prospect for political change is necessary for a government to consent to --or to insist on--

granting independence to the central bank as a way of tying the hands of the successor government.

The two views can be reconciled by arguing that, while the expectation of imminent political change enhances the prospects for obtaining central bank independence, political instability (i.e., the expectation of continued changes in government) hinders it. Political instability reduces the effectiveness of FOI, as well as the benefits associated with central bank independence because of its apparent reversibility.³ At the same time, there is a relation between political instability and inflation as documented by Cukierman, Edwards and Tabellini (1992). Thus, political instability is likely to be associated with --and even induce-- both higher inflation and the lack of central bank independence.

Cukierman, Webb and Neyapti (1992) point out that reverse causality between inflation and central bank independence can also exist to the extent that low inflation tends to make the central bank more reputable (whether or not fiscal policy was conducive to such an outcome), which in turn allows the central bank to seek greater autonomy. This will happen even if the political interests and effectiveness of groups outside government remain constant, but the reputation of the central bank and the strength of FOI are likely to work together as a reputable central bank can more effectively use outside support to further its policy and operational autonomy goals.

As a corollary, countries that face greater macro volatility will have central banks with a more tarnished image, which will undermine their efforts to become

independent. The implication is that LDCs with greater vulnerability to external financial or terms of trade shocks (and with fewer policy instruments to deal with them) are less likely to have an independent central bank.

Summing up, the implication of Posen's view that *interests* rather than *institutions* matter is that in LDCs where FOI is weak, granting central bank independence will not *per se* achieve the price stability objective. Instead, reformers should emphasize financial policies that generate greater FOI such as financial deregulation and privatization -- which will in turn deliver lower inflation along with central bank independence. Indeed, the increasing tendency for central bank independence in Latin America is occurring at the time of drastic liberalization of their financial markets.⁴ In Asia, where financial markets are being liberalized much more slowly, central banks remain under the purview of governments.

3. Potential policy conflicts: the good and the bad

The second set of arguments that undermine the case for central bank independence revolves around the policy conflicts that may arise between the government (fiscal policy) and the ICB (monetary policy). The conflicts can either be *passive* (stemming from an unclear division of responsibilities) or *active* (as each engages in strategic behavior in order to force actions by the other), and can arise in the areas of debt management and financing of fiscal deficits, exchange rate management, and policies to preserve banking stability. Each of these areas are reviewed below.

It should be noted that conflict *per se* need not be economically harmful. In

fact, it is precisely through this latent or potential conflict that ICBs are supposed to keep the government's fiscal policies in check. However, conflict can be deleterious if it impairs policy accountability of any or all parts of government or if lack of monetary and fiscal policy coordination lead to a sub-optimal choice of policy instruments. In either case, policy inconsistencies can undermine the policy commitment that central bank independence is supposed to signal. Formal modelling treatment of these issues is beyond the scope of this paper; instead, some examples are provided to illustrate these types of conflicts.

Friedman (1959, 1962) argues that, as long as the central bank does not retain public debt management powers, central bank independence makes it harder to determine who is responsible for monetary accommodation of fiscal deficits. As a result, it can actually induce an erosion of fiscal discipline. He notes that "open-market operations and debt management are different names for the same monetary tool, wielded in one case by the [central bank] and in the other by the Treasury" (Friedman, 1959, p. 52). These two types of policies cannot be evaluated independently of each other, and in fact a clear picture of government policy can only be obtained by consolidating the accounts of the central bank and the Treasury.

Consider the case of a government sustaining large fiscal deficits which the ICB is reluctant to monetize. In an LDC with shallow capital markets and limited access to foreign savings, substantial domestic debt financing of deficits might induce inordinately high real interest rates and crowd out credit to the private

sector. By claiming that these are monetary problems, the government might be able to shift political responsibility for its fiscal actions to the ICB. Hetzel (1990) describes similar instances when the Federal Reserve Bank in the U.S. was "scapegoated" for the prevailing high interest rates.

Even where the central bank enjoys no autonomy, the government often still tries to shift responsibility for its fiscal actions to the central bank. The large quasi-fiscal deficits of Latin American central banks through the 1980s attest to that: by shifting deficits to the central bank, the government could present reasonably balanced books to the legislature and the public. But it is clear that incentives for seeking to shift responsibility for the consequences of its fiscal actions to the central bank are even greater if there is an arms-length relationship with the central bank as it provides for a more effective political shield.

While an ICB with a clear low inflation mandate enhances accountability in terms of the narrow inflation goal, it may result in an unclear assignment of responsibilities (and hence reduced accountability) in terms of other relevant economic objectives (e.g., real interest rates or credit availability to the private sector). If the public evaluates the performance of the central bank --and hence the credibility of its commitment-- on the basis of such quantities, the central bank should care about them even if its narrow objective function only specifies the attainment of price stability. After studying the behavior of six developed-country central banks, Bernanke and Mishkin (1992) conclude that central bankers pursue multiple economic objectives even if they have a narrow anti-inflation mandate,

and, further, that their attention is focused at any given time on the variable that is currently "in crisis" to the neglect of other concerns.

This opens the possibility for the ICB and the government to engage in games of "chicken" whereby one's actions are undertaken at least in part to force actions on or elicit reactions by the other. The two will behave strategically, and the degree of cooperation will be determined endogenously by reputation (of the individuals as much as of the institutions involved) and by observed behavior in previous repetitions of the game. Alesina (1988) describes a situation where the government may pursue an overly expansionary fiscal policy to test how willing the central bank is to persist with an unaccommodative monetary stance; and, conversely, the central bank may respond with an overly restrictive monetary policy to establish toughness and to force the government to change policy. Such games can induce suboptimal outcomes (Alesina, 1989).

These potential policy conflicts presuppose that there is scope for an independent monetary policy. The limiting case is where the size of the financial system is so small relative to budget deficits that the central bank has no choice but to monetize deficits. In the original Sargent and Wallace (1981) model, fiscal dominance occurs because fiscal policy is assumed to be set exogenously to monetary policy and there is a limit to the amount of government debt that can be held by the public (no Ponzi condition); satisfying the inter-temporal budget constraint means that sooner or later budget deficits have to be monetized. Consider the previous example, where an unrepentant profligate government

clashes with a central bank that refuses to monetize deficits. The credit crunch and the appreciation of the currency induced by massive debt-financed fiscal deficits might prove so deflationary as to make room for a monetary expansion by the central bank --thereby accommodating fiscal deficits *ex post*.⁵ If the central bank recognizes this from the outset, it might prefer to accommodate the deficits monetarily in the first place.

Burdekin and Laney (1988) review the empirical literature on the causality (i.e., extent of dominance) of monetary and fiscal policy in developed countries. They themselves take the approach of estimating reaction functions for the government and central bank simultaneously, with endogenous inflation. Their results for developed countries show two-way causality, i.e., no dominance.

One of the factors that induces fiscal dominance is the central bank's lack of suitable instruments of monetary control. This will be the case in LDCs where government securities markets are aliquot, the central bank does not hold sufficient amounts of tradable securities, and its regulatory and supervisory powers over banks are inadequate to enforce direct quantitative credit restrictions.

If fiscal dominance applies, that is, if a country's economic policy is only as good as its fiscal policy, the anti-inflation stance of the ICB will not be credible (Swinburne and Castello-Branco). Institutional central bank independence does not translate into independence of monetary policy -- in which case the central bank will not be up to its anti-inflation task.⁶

These potential conflicts have implications not only on the effectiveness of

central bank independence once it is instituted, but also on the likelihood of observing such independence in the first place. The central bank is likely to be more independent where the government follows a conservative fiscal policy as there will be less of a chance of the kinds of conflicts between monetary and fiscal policies described above to emerge. A government that attaches less value to controlling the printing press is more likely to grant independence to the central bank. As Cukierman (1992) points out, LDC governments with more unstable fiscal revenues (and hence higher inflation volatility) are more likely to value the option of having recourse to seignorage. In this case, the observed correlation between inflation and central bank independence may be due to the fact that both these factors are themselves correlated with the government's fiscal stance.

Along the same lines, the *size* of the government might be related to both central bank independence and inflation. Alesina (1988) reports a positive correlation between the share of government expenditures in GDP and inflation. It is likely also that smaller budgets (controlling for the level of development) reflect a less intrusive philosophy of government, which should be sympathetic with central bank independence.

Likewise, the reputation of the central bank --and, hence, the degree of central bank independence-- will depend not only on the inflation record but also on the central bank's scope for undertaking an independent monetary policy. Where the central bank does not have powerful instruments of monetary control it is less likely to be independent as it will not serve as a strong commitment device.

Policy conflicts can also arise with respect to exchange rate policy. In no country has exchange rate policy been turned over entirely to the central bank (Swinburne and Castello-Branco, 1991). Moreover, actions by both the government and the ICB will affect exchange rate determination even if the narrow role of exchange rate regulation and intervention is specifically assigned to one of them. Goodhart (1994) comments that proponents of central bank independence invariably support a price stability mandate for the ICB without first questioning whether monetary policy should be geared towards preserving the stability of the external, rather than internal, value of the currency. But the reality is that if the ICB is to be only charged with maintaining price stability the government must be prepared to relinquish other objectives of exchange rate policy. In their study of six developed-country central banks, Bernanke and Mishkin (1992) observed that in all countries the central bank modified its policy at some point in time to arrest what they considered to be an undesirable exchange rate trend.

Suppose for instance that, in the face of large foreign capital inflows, the government chooses to let the exchange rate float. In the absence of foreign exchange intervention, the induced appreciation of the exchange rate makes room for a non-inflationary monetary expansion by the ICB. This action by the central bank undermines the government's policy of letting the exchange rate appreciate. Conflict can be expected when the government and the ICB can both affect the exchange rate analogously but have different objective functions.

The need for coordination is even more important under fixed or managed

floating exchange rate regimes. In fact, it could be argued that central bank independence becomes relatively less meaningful under such regimes as monetary policy is bound by objectives other than price stability. This suggests that LDCs, which tend to belong to currency blocks, are less likely to have an independent central bank.

A third channel through which monetary policy might be either conflictive with or subservient to the government's wider economic policies is through their impact on the banking system. If the central bank has lender of last resort, bank supervisory or deposit insurance functions, it may face a tradeoff between its monetary and institutional stability objectives. As suggested by Grilli, Masciandaro and Tabellini (1991), the government can force the central bank to react to (accommodate) the government's policies if these might jeopardize banking stability. Large fiscal deficits which, because the central bank is unwilling to finance them, generate an unsustainable path of domestic or foreign debt might trigger a flight to cash. In order to prevent this (i.e., to avoid having to act as lender of last resort), the central bank might have to accept some monetization of the debt. Swinburne and Castello-Branco (1991) further argue that any bank supervisory duties by the central bank will expose it to political pressures to act -- or not act-- in specific circumstances. These pressures operate at the institutional level but might condition monetary policy -- and hence might undermine the central bank's credibility of commitment.

To sum up, conflicts can arise between autonomous monetary and fiscal

policies in relation to their impact on: (i) public debt management and domestic credit conditions; (ii) exchange rate policy; and (iii) institutional stability of the financial sector. ICBs will not generate any credibility in economic policies if --as is likely to be the case in LDCs-- the country faces fiscal dominance, the banking system is in a precarious financial condition, or if there are no clear mechanisms to resolve conflicts between monetary and fiscal policies. If this is the case, at best the credibility gains associated with an ICB might not accrue; at worst, such conflicts might lead to an inferior policy outcome than under less disciplined, but more coordinated, economic management.

These potential policy conflicts are likely to be aggravated in practice by the difficulty of securing true political independence for the central bank, which is further discussed in Section 5. If, as is often the case, the degree of independence is murky and institutional relations are dominated by personal interactions, conflicts will arise at many other levels. Strategic behavior of the government and the ICB will entail not only choice of policies but also political arm-twisting and back-door negotiations.

4. The correlation between inflation and central bank independence

The two preceding sections have provided abundant theoretical reasons why the observed negative correlation between inflation and central bank independence does not in and of itself provide *prima facie* support for central bank autonomy. The correlation may be spurious (due to omitted variables) or reflect reverse or two-way causality. This is because low inflation and central bank independence is

likely to be observed in countries with: (i) a solid political constituency opposing inflation; (ii) a more stable and conducive political system; (iii) a more reputable central bank; and (iv) a conservative fiscal policy and responsible government. While the possibility of alternative causality relationships and simultaneity biases have been widely acknowledged in the literature, it has not received adequate attention at either a conceptual or empirical level.

The implications are two-fold. First, the lack of independence of central banks in LDCs should not be interpreted systematically as demonstrating LDC governments' preference for higher inflation. Sections 2 and 3 have reviewed the many political economy reasons why the central bank is less likely to be independent in LDCs than in more developed countries. Second, positive recommendations on central bank institutional arrangements cannot be made if causality relations are not well established.

At a purely statistical level, the negative correlation between inflation and central bank independence is well established for developed countries.⁷ Even that is less clear in LDCs. Cukierman, Webb and Neyapti (1992) have devised the most comprehensive set of characteristics purported to signify central bank independence, and were the first (and only ones) to test the central bank independence proposition on LDCs. They report that, for LDCs alone, the standard indices of legal/institutional central bank independence are not correlated with inflation. On this basis they argue that in LDCs statutory measures are not relevant since the practice is often more important than the law. While this might

be the case, Walsh (1993) correctly notes that there is a problem with using the correlation between central bank independence and inflation to test both the effectiveness of central bank independence *and* the appropriateness of different measures of central bank independence.

Standard *de jure* indices of central bank independence have the added problem of combining measures of legal or institutional independence (e.g., mechanisms for appointment and dismissal of central bank officials, and control over budgetary resources of the ICB) with measures of the degree to which central bank exerts discretion in setting monetary policy (e.g., precision in the definition of central bank objectives, and the legal stipulation of limitations on government borrowing from the central bank).⁸ While the two need not go together conceptually, a rules-based ICB is much more likely to preserve its independent stance in practice and is likely to achieve the policy credibility it is designed for. Such studies test the central bank independence and rules-versus-discretion propositions jointly.

It is commonly acknowledged in the literature that the degree of central bank independence is more a product of informal implicit agreements, tradition and personalities, and hence *de facto* independence (whether or not it is legally sanctioned) is increasingly being stressed. In this case, the problems of endogeneity, multiple causal directionality and measurement errors are even more pervasive and less tractable. Operational *de facto* independence is the product of day-to-day political, institutional and personal interactions and implicit

negotiations, and hence is very much shaped by prevailing attitudes, political power structures and economic outcomes, all of which themselves have a direct bearing on inflation. On the other hand, time series variation in indicators of *de jure* independence are much less sensitive to such contemporaneous economic and political conditions.

Cukierman, Webb and Neyapti use the turnover rate of central bank governors as a measure of *actual* central bank independence on the grounds that dependent central bank governors are likely to be replaced more frequently. Using this measure they do find a negative correlation between independence and inflation for LDCs. There are several reasons why this might not be a good proxy for actual independence. First, as they themselves acknowledge, a relatively subservient governor will tend to stay longer and survive different governments despite their lack of autonomy. Second, as Walsh notes, high inflation might be viewed as an indication of failed central bank policies on the part of an independent (and, hence, presumably directly responsible) central bank governor. Thus, resignation of the top central banker might be expected following an inflationary bout --indeed, might be desirable *especially* if the central bank is independent. Third, central bank governor turnover probably reflects specific attempts by the government to encroach on central bank independence -- i.e., instances in which the government is using non-statutory methods or the threat of legal changes to enhance its influence on monetary policy. The turnover rate depends on both the absolute level of independence and the divergence of

monetary and fiscal policies (i.e., the potential for conflict). Therefore, the measure may be driven to a large extent by the government's fiscal stance, i.e., it selects in relatively fiscally irresponsible governments. If this is the case, the correlation of central bank governor turnover and inflation might just mimic the correlation between fiscal policy and inflation, and hence exaggerates the effect of central bank independence on inflation. Fourth, this measure can be expected to be correlated with political instability -- i.e., the rate of turnover of governments, not just central bankers. A central bank that depends from a stable government would experience low turnover.

Cukierman, Kalaitzidakis, Summers and Webb (1993) and Cukierman and Webb (1994) refine the turnover measure by normalizing for the frequency of government changes (political instability) and by restricting attention to the six months following a political transition (when changes in central bank governorship are presumed to be strictly politically induced). This measure of central bank independence reflects: (i) the length of the governor's term; (ii) whether or not the governor's term is staggered with the government's; and (iii) the frequency of governor replacements during the course of his term. The first two are strictly legal parameters (which jointly determine the probability that central bank governor and government turnover will coincide) and only the third can be construed to reflect extra-legal control of the central bank. Thus, contrary to the authors' claims, this measure captures a mixture of *de jure* and *de facto* central bank independence.

Restricting attention to periods around political transitions has both advantages and disadvantages. The first three criticisms listed above for turnover rates will still apply, but much mitigated. It will still be the case that a governor that has proved to be particularly malleable in the past will be *less* likely to be replaced after a transition, and that systematic replacement of the governor reflects an incoming government whose profligate fiscal policy can be expected to clash with the central bank. Given the higher central bank governor turnover in LDCs, this variable to a large extent replicates an LDC dummy -- and may show up statistically in their regressions for this reason. On the other hand, this index will only capture part of the relationship between government and central bank as it focuses only on political transitions.

To sum up, going beyond the simple correlation result and testing the causality of central bank independence is remarkably difficult. Quantifying central bank independence involves problems of both definition (listing the inherent characteristics of central bank independence) and measurement (potential lack of observability of these characteristics). The above discussion shows how the inherent arbitrariness of numerical indices of central bank independence (which can be based on a variety of legal, institutional and observed behavioral characteristics) further strains causality relationships. The only avenue left to minimize these problems is, following the example of Cukierman, Kalaitzidakis, Summers and Webb, to narrow down the definition of independence, at the cost of only getting a partial picture.

Econometric cross-country analyses are also hazardous because potential instruments and factors that one would need to control for (e.g., political stability, government fiscal policy stance, deepness of financial sector and financial condition of the banking system) can be construed to be themselves correlated with both inflation and central bank independence for reasons described in the two preceding sections. This translates into a lack of robustness to alternative specifications of current econometric tests of the independence proposition.⁹ Granger causality tests are also marred by the lack of historical variation in indices of central bank independence derived from legal or institutional factors.¹⁰

Unfortunately, Sections 2 and 3 show that, even if causality and simultaneity problems were satisfactorily dealt with through two-stage least squares or system estimation, the problem of omitted variables (which give rise to spurious correlations) would remain to be addressed. A convincing test of the central bank independence proposition cannot be undertaken in the absence of a comprehensive macroeconomic, political and institutional model, which is beyond the current state of theory.

5. ICB design issues: accountability and governance

Another set of issues that throws into question the desirability of granting independence to the central bank relates to the difficulty of designing an institutional arrangement for the ICB that ensures its independence from the government while still preserving its accountability to the public and its anti-inflation bias. Swinburne and Castello-Branco (1991) stress the importance of the

institutional framework given that the incentives operating on the ICB can be crucial in building the sought after policy credibility. The key legal/institutional aspects are: (i) the mechanisms for appointment and composition of the central bank board; (ii) the degree of democratic control over and public accountability of the ICB; (iii) incentive structures (if any) for the ICB's board and management; and (iv) control over the ICB's budgetary resources.

The benefits of the ICB are premised on its officials being "more conservative than the general population," but their proponents are silent on how to ensure this institutionally. No country has implemented --or even proposed-- a separate, direct democratic system to appoint their top central banker(s), and hence the task is generally left to the government (most often with the acquiescence of the legislature, and sometimes with some minority representation from banks). The question remains: if the government is not trusted to run a conservative monetary policy, why should it be trusted to (more or less directly) appoint conservative central bankers?

Goodman (1991) implies that the "conservative *ethos*" of central bankers should produce the desired outcome. To the extent that this *ethos* stems from central bankers' intimate relation with the financial system (i.e., exposure to FOI, to use Posen's terminology), it cannot be relied upon in LDCs given their generally weaker FOI as contended in Section 2. Moreover, if countries rely on FOI alone to ensure the conservativeness of its central bankers the result will be that central bankers' preferences will be least different from society's precisely when societal

aversion to inflation is weak. An ICB will work least well when it is most needed.

It might also be argued that (sparring) high-profile appointments of prominent central bank officials, unlike day-to-day monetary policy decisions, generate sufficient scrutiny by the public to ensure that the government "does the right thing." This is a naive view as it assumes that the public can be distracted and fooled when decisions are broken into smaller pieces. In any case, it is a leap of faith to believe that government will not be inclined to appoint a central bank board that has a discount rate (or decision-making time horizon) similar to its own.

The fundamental problem is that institutional mechanisms currently in place for ICBs are not consistent with their objectives, as they do not solve the dynamic inconsistency problem. If the government is not bound in any way on the appointment of future ICB board members, society can judge the "conservativeness" of the *current* board of the ICB but not that of *future* boards. The government can "tie its hands" (i.e., credibly commit to a low-inflation policy stance) only for the duration of the *current* board of the ICB. It gains no policy credibility thereafter, and hence is subject to time inconsistency for any period of time longer than the average duration of a board. Consequently, an ICB merely lengthens the unit of time over which time inconsistency may arise --from the normal daily monetary policy decision-making horizon to the average duration of the board. If the duration of the ICB board is longer than the period between elections, this arrangement does insulate monetary policy from the electoral cycle. However, it does little to eliminate broader political business cycles associated

with multiple terms and partisan politics.

The practical solution found in many countries is to lengthen the term of central bank board members in an attempt to stretch the "commitment horizon." Two caveats are in order. First, the (otherwise desirable) practice of staggering appointments actually has the effect of reducing the *average* term of the board -- i.e., the time it takes to appoint a new board majority. If board members are appointed for 14 years as in the US --clearly a long time by any standard--, the average remaining term for its board members is only seven years -- hardly reassuring for holders of thirty year bonds.¹¹ Second, there is a clear conflict between "buying" credibility by prolonging board terms and securing accountability for the board, which is discussed below.

To sum up, the conceptually strong arguments for independence of the central bank have not been backed up by appropriate mechanisms for appointing central bankers that ensure that in the future central bankers will be more anti-inflationary than the government. In practice, future credibility is secured by fostering the development of a strong FOI, investing in central bank reputation and lengthening board appointments. These are poor substitutes as they will work successfully only under ICB-friendly environments --when the ICB is least needed--, and in the latter case aggravates ICB accountability problems.

A related issue is the accountability or governance of the central bank board once it is appointed. ICB boards cannot be accountable to the public at large as they are not appointed democratically, and cannot report to the government as

this would violate its independence. Instead, proponents of central bank independence visualize the ICB as operating on a par with the executive, legislative and judiciary branches of government, its powers derived from some kind of "monetary constitution" -- a broad declaration of policy objectives. However, none has been proposed that narrowly specifies what constitutes non-compliance with targets or objectives, or that lays out corrective or punitive action in the event of non-compliance. Hence, a broad monetary constitution represents a weak, almost purely moral, form of accountability.

In practice, most countries with an ICB rely on central bankers' reputation as a control device on their actions. The problem is that reputational accountability would work least well precisely when it is needed the most: in countries where government has appointed less conservative central bankers, where there is a small pool of talented and reputable individuals to draw on for the central bank board, or where the ICB is operating in a difficult policy environment -- circumstances which are more likely to arise in LDCs. Accountability is particularly important for a fledgling ICB as it would be critical to secure the sought-after policy credibility, to develop reputation, and to compensate for the erosion of the democratic principle.

Friedman (1962) questions the wisdom of concentrating so much power in a body free of any kind of direct, effective political control. He suggests that a superior arrangement would be to secure legislative (rather than executive) control over the central bank; the legislature would approve the central bank's (multi-year)

operating monetary rules, and the central bank would carry them out. The legislature would be in charge of "fleshing out" and overseeing the implementation of the ICB's monetary constitution. In practice, only a few countries have adopted a fully rules-based monetary policy with the constitution of a currency board. Bernanke and Mishkin (1992) observe that even "hardline" developed-country central banks never adhere to strict, iron-clad rules but may adopt a hybrid of rules and discretion. Thus, no major country has circumvented the central bank accountability issue by adopting monetary rules.

In the absence of explicit control mechanisms, ICB accountability can only be preserved in the limit by maintaining the possibility of withdrawal of the treasured independence from the central bank. Elected officials' power to bring the central bank under their control effectively confers democratic legitimacy on the ICB. Under such a model the government waives, but does not ultimately surrender, its power over monetary policy. It is perhaps for this reason that many countries, including the U.S., maintain a certain degree of ambiguity about the permanence of the independence -- what Swinburne and Castello-Branco refer to as "the tension between formal independence and actual, but unacknowledged, dependence." In fact, it is rare to find the independence of the central bank enshrined in national constitutions. This comes at the price of exposing the central bank to some degree of potential government interference: as Goodman points out, in the long run ICBs remain vulnerable to political threats of losing their independence. The bottom line is that, under existing institutional arrangements,

accountability and legal independence are at odds, and one can only hope to strike the right balance between the two. This game can only be played fruitfully in politically stable countries. It is important to maintain the *threat* of revoking independence but with a low probability of exercising it. This accountability device would not be appropriate in the less politically stable LDCs.

Another device frequently used to mitigate ICBs' lack of democratic representation and public accountability is to appoint a diverse ICB board reflecting broad interests in the economy. For example, the six lay members of the Banque de France's first independent board appointed in January 1994 were drawn from finance, industry, politics, academics and journalism.¹² The problem, again, is that an ICB board that fairly represents society's interests is at odds with the idea that the central bank board should be more conservative than society at large.

A third device --implemented to date in Canada and New Zealand-- that can serve to enhance credibility in the face of the lack of public accountability is for the ICB to state explicit inflation targets against which its performance can be measured. Even abstracting altogether from the (as yet theoretically unsettled) issue of whether inflation is the only economic variable the central bank should care about, the much touted narrow inflation objective of ICBs is a fuzzier objective than most would admit, and as such cannot be taken too literally for operational purposes. Friedman's long and variable lags and gaps in our knowledge of the monetary transmission mechanism mean that such operating rules cannot be relied upon to entirely replace accountability.

Inflation can stem from many factors (supply-side shocks, financial innovation or other domestic monetary shocks, fiscal and government borrowing policies, etc.) that are not directly under the control of the central bank. Setting a numerical inflation target for the central bank merely creates a perception of precision that does not correspond with reality, and does not necessarily provide a benchmark for measuring the *quality* of monetary policy *ex ante*. To the extent that LDCs are more vulnerable to monetary shocks (given their smaller size and the larger volatility of real variables they are exposed to) and have poorer data availability and quality, such mechanisms are likely to be even less effective in enhancing credibility. An inflation target also falls short of providing accountability in that if the targets are not met there is no feedback or control mechanism to ensure that targets will be met in the future.

In addition, New Zealand's ICB has taken the extra step of (indirectly) linking the bank's budget to the inflation outcome, as the central bank's budget is fixed in nominal terms for five year periods.¹³ While this introduces an incentive for good performance and helps ensure that monetary targets are met, it does not constitute --and cannot substitute for-- external accountability.

One can explain in this light Friedman's (1962) observation that historically central banks in developed countries have been given independence when and where there was a commodity standard. The commodity standard represents an extreme form of explicit monetary policy targeting, serves to curb the influence and power of the ICB, and effectively supplants public accountability.

To sum up, the issue of ICB accountability has not been resolved satisfactorily. The erosion of democratic control over the central bank has not been replaced with another suitable form of governance. In practice, democratic governments have sought to mitigate this problem by investing in central bank reputation, retaining a certain level of ambiguity about the degree of central bank independence, appointing a diverse ICB board that reflects different interests in society, and by stating explicit ICB policy targets against which their performance can be measured. However, some of these approaches in part vitiate the whole objective of having an ICB.

The third (related) major design issue concerns who controls the ICB's budget. It has long been recognized that if the ICB's budget is not set externally (as in New Zealand) the central bank has a perverse incentive to inflate in order to maximize profits (and hence its own expenditures). At best, this undermines credibility in the ICB's objectives, and aggravates the accountability and governance problems discussed above. At worst, it actually introduces a pro-inflation bias.

A common argument put forth to support the independence of central banks especially in LDCs is that they typically have a more technically competent, dedicated and professionalized staff than government ministries, and hence presumably are more trustworthy for monetary policy decision-making. While this is certainly generally the case, the mere fact that central banks have succeeded in maintaining higher budgetary resources than other government agencies to pay for

this higher quality staff is troubling in and of itself. It is an indication that central banks have largely escaped the fiscal realities of their respective governments. Yet any kind of government budgetary control would introduce the potential for political manipulation of monetary policy. Friedman's proposal for legislative control of the central bank solves this issue by making it possible for parliament to approve the central bank's (multi-year) budget, as is done in New Zealand.

Lastly, it should be stressed that central bank independence must not only be recognized legally but also maintained in practice. Protecting the ICB from government interference in its day-to-day operations may be difficult if, as Swinburne and Castello-Branco (1991) argue, non-statutory methods for exerting influence can be used to undermine the central bank's independence if the government is determined to do so. Cukierman (1992) argues that in LDCs the law is applied less literally and that there is less respect for division of authority between different branches of government. The role of tradition in shaping inter-institutional relationships as pointed out by Banaian, Laney and Willett (1983) is likely to be more important in less legalistic LDC societies. The implication is that ICBs are likely to be much less effective in signalling commitment in LDCs.

In the same spirit, Friedman (1962) argues that one effect of the lack of accountability over the central bank is that policies (and inter-agency relations) are highly dependent on personalities. Thus, the degree of actual central bank independence can be expected to change with the personalities involved, even if the legal and institutional setup is invariant.

Securing true *de facto* autonomy entails very fundamental changes in the interactions among politicians, bureaucrats and institutions. In addition, in the words of Goodhart (1994), "independence, once granted, can only be maintained and effectively utilized by an unrelenting and continuous political and educational campaign to explain what monetary policy can, and cannot, effectively do."

6. Concluding thoughts: an independent fiscal board counterproposal

This paper has argued that the purported benefits of an ICB may be eroded by potential conflicts between fiscal and monetary policy and by deficiencies in their institutional design (especially as related to mechanisms for appointment of the board, public accountability and control of its budget). These factors imply that, if the central bank is granted independence, the dynamic inconsistency problems traditionally associated with monetary policy are not eliminated but merely transformed. Monetary policy independence is much more the product of day-to-day personal interactions than of the legal or institutional framework for central bank independence. Institutions are shaped by the country's inflation preferences and record, and have only a very little bearing on these. The policy implication for LDCs is that in order to secure low-inflation the best course of action is to undertake financial sector reforms that bolster FOI (e.g., liberalization, privatization, and reduction in credit to the government) rather than on instituting easily reversible and practically meaningless changes in their legal/institutional structures.

The independent central bank model offers monetary policy special protection from the political process. However, as we have seen, in countries with shallow

financial systems, monetary policy is the reverse side of the coin of fiscal policy and can only play an accommodative role. Fiscal policy (taken in a broad sense to include public enterprise expenditures) is most often at the root of macro policy disturbances in LDCs. Where this is the case, the greater fragility of fiscal policy to political interests should make it more meritorious of mechanisms that remove it from the political process. An independent fiscal board (IFB) could be set up, analogously to an independent central bank. Its mandate could be devised in a number of ways. For example, the IFB would determine only the size of the budget deficit and the government would decide the overall level and composition of revenues and expenditures subject to the budget deficit constraint.¹⁴

This proposal represents a substantial curtailment of government discretion in fiscal policy. Relinquishing authority over fiscal policy is less acceptable politically than renouncing to monetary policy precisely because the micro implications and ramifications of fiscal policy is the material politics is made from. It is generally easier to target benefits through fiscal policy. In the extreme, without discretionary fiscal policy, there would not be much left to government.

Despite its apparent stringency, the IFB proposal can be related to other proposals currently being discussed. It is equivalent to an ICB plus a pre-set limit on government borrowing from all sources. The balanced budget amendment proposal in the U.S. is essentially the IFB proposal with the IFB in addition waiving its discretion to change the deficit over time. Thus, the IFB proposal (as specified above) is more flexible than the balanced budget amendment proposal but stricter

than the ICB proposal.

While an IFB might be superior to an ICB as a way of binding policy-makers' actions and thereby enhancing credibility, the political and operational problems seem more daunting. It would be difficult to specify an objective function for the IFB given the multiplicity of potential targets (e.g., annual GDP growth rate, long-term growth, standard of living, productivity growth, international competitiveness, etc.) which may not be fully compatible. There would also be greater difficulty in defining and measuring fiscal (rather than monetary) flows in a tamper-proof manner. Accounting gimmicks, loop-holes and distortions are bound to exploit any necessarily arbitrary set semantic and methodological stipulations.

The IFB proposal seems far-fetched; but tying the fiscal hands of governments is actually the role often played by the IMF *vis à vis* LDCs. If we are going to make broad changes in the political/institutional structures underpinning economic policy-making, it would seem to make more sense to force discipline on fiscal policy directly rather than indirectly through monetary policy.

Notes

1/ Cukierman (1992) contains formal treatment of the now standard views on the advantages of central bank independence, which are not further reviewed in this paper. Persson (1988) has a broader discussion of time inconsistency and the role of credibility in macroeconomic policy.

2/ In the case of Argentina the authorities chose to enhance monetary policy credibility by establishing a legally-binding monetary rule (requiring that the monetary base be backed by foreign reserves) rather than by effecting institutional changes. Chile is the one Latin American country where central bank independence was granted (in 1989) after the bulk of financial sector reforms were completed.

3/ Cukierman (1992) offers a somewhat different interpretation. He draws a distinction between *party* political instability (defined as political instability in countries with internal cohesion) and *regime* political instability (where there is no internal political cohesion). He argues that central bank independence should be correlated positively with measures of party political instability and negatively with measures of regime political instability. These labels seem inappropriate as they seem to connote differences in political structure (party system *versus* totalitarian regimes) rather than in degree of internal political cohesion.

4/ Brazil remains the only major Latin American country not to have constrained the government's control over monetary policy (see note 1). This is consistent with Cukierman's (1992) observation that widespread indexation (as is the case in Brazil) makes central bank independence less pressing (i.e., weakens FOI).

5/ Lago (1991) provides a vivid example of such a process. From September 1988 to July 1989 the Peruvian central bank --one of the most independent in Latin America at the time-- stopped accommodating the bulk of the Treasury's requests for credit. This induced a 23% drop in GDP and a 75% appreciation of the parallel exchange rate. The policy ended with the resignation of the President of the central bank, which signifies not so much that politics triumphed over monetary policy as much as the utter impossibility of running an independent monetary policy under the circumstances.

6/ Casual support for the claim that in Latin America monetary policy is dominated by fiscal policy is provided by the fact that what distinguishes successful stabilizations from unsuccessful ones in the region is that only the former addressed fundamental fiscal imbalances. This suggests that the crises were fiscal in origin.

7/ Empirical support for the correlation between inflation and central bank independence has been provided, among others, by Banaian, Laney and Willett (1983), Alesina (1988) and Cukierman, Webb and Neyapti (1992). Grilli,

Masciandaro and Tabellini (1991), Alesina and Summers (1993) and Cukierman, Kalaitzidakis, Summers and Webb (1993) also look at the correlation of indices of central bank independence with a variety of real variables and interest rates.

8/ Studies that have examined this joint hypothesis include Goodman (1991) and Cukierman, Webb and Neyapti (1992). Swinburne and Castello-Branco (1991) explain why independence and rules-based monetary policy are generally found (and measured) together. Hetzel (1990) hypothesizes about the circumstances under which the two are more likely to occur simultaneously.

9/ To illustrate the effect of endogenizing such variables as fiscal deficits and inflation, consider the difference in results between Banaian, Leroy and Willett (1983) and Burdekin and Laney (1988) on a similar database (comprising developed countries over roughly 1960-80). In the former study, the coefficient from regressing central bank independence on inflation is negative and significant at the 1% confidence level. In the second study, inflation, fiscal deficits and money growth are endogenized in a system of three equations with central bank independence as an independent variable in all three equations. In this case all three coefficients on central bank independence are negative but not significant at the 5% confidence level. It should be mentioned, however, that they use a very crude measure of central bank independence (a 0-1 dummy).

10/ Cukierman, Webb and Neyapti (1992) overcome this problem by using the turnover rate of central bank governors as a proxy for actual (as opposed to statutory) central bank independence. They exploit the greater historical variation of the average turnover rate for each of three decades, and confirm two-way causality.

11/ In fact, the duration of a 30-year Treasury bond is 12.4 years (as of June 1994). So half the board of the Fed will be replaced almost 5½ years *before* the bondholder gets half his money back (in present value terms) -- and three Fed chairmen later (since the chairman is appointed for only four years). Actually, the Fed chairman is very powerful so that, effectively, the average commitment horizon is only two years. The newly independent French central bank board also has a short time horizon: the three Banque de France officials stay on for six years and the six lay members are appointed for nine years. Consequently, half the board members can be replaced within just four years.

12/ The Banque de France's first independent board consisted of a successful financier (the head of an insurance company), a representative from an industry association (the head of the international standards testing laboratory), a financial regulator (the chairman of the stock market watchdog), a socialist politician (presumably representing labor), an academic economist and an economic journalist/commentator.

13/ In this vein, Persson and Tabellini (1992) devise an incentive-compatible contractual approach which can be used to solve the inflation bias.

14/ Alternative (tougher) schemes could be: (i) the IFB determines the entire budget (its size and composition) so that the fiscal process is removed from the government's hands; or, my personal choice, (ii) the IFB determines total revenues and expenditures (i.e., the total size of the budget and the deficit) and the government decides only the composition of spending and taxation.

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